

PCT/DE03/04288

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PATENT CLAIMS

1. An electrode for an electrochemical cell having a liquid electrolyte (3), containing channels (2) in which an electrolyte liquid may flow.
2. The electrode according to Claim 1,

which contains a coated film (5), the coating (2) containing channels.
3. The electrode according to one of Claims 1 or 2,

wherein the channels (2) are implemented in the form of grooves on the surface of the electrode (1).
4. The electrode according to one of Claims 1 through 3,

wherein the channels (2) are embossed into the electrode (1).
5. The electrode according to one of Claims 1 through 3,

- which contains a coated film (5) and
- wherein the channels (2) are formed by uncoated partial regions of the film (5).
6. The electrode according to one of Claims 1 through 5,

wherein the channels (2) have a width (b) between 0.1 and 1 mm.
7. The electrode according to one of Claims 1 through 6,

wherein the channels (2) have a depth (t) between 10 and 200 μm .

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8. The electrode according to one of Claims 1 to 7,

which extends along a longitudinal direction and
wherein the channels (2) run transversely to the
longitudinal direction.
9. The electrode according to one of Claims 1 to 8,

wherein the channels (2) run essentially along
equidistant straight lines that are parallel to one
another.
10. The electrode according to one of Claims 1 to 7,

which extends along a longitudinal direction and
wherein the channels (2) run diagonally to the
longitudinal direction.
11. The electrode according to one of Claims 1 through 8,

wherein the channels (2) run along curved lines which
are offset parallel to one another.
12. The electrode according to one of Claims 1 through 7
or 10,

wherein the channels (2) intersect one another.
13. The electrode according to one of Claims 1 through 12,

which contains a metal film coated with carbon powder.
14. An electrode roll,

wherein multiple layers of electrodes (11, 12)
according to one of Claims 1 through 13 are positioned
one on top of another.

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15. The electrode roll according to Claim 14,

wherein two electrodes (11, 12) according to one of Claims 1 through 13 are wound up.
16. An electrochemical cell having a liquid electrolyte (3), containing a roll (8) according to one of Claims 14 or 15.
17. A method for manufacturing an electrode according to one of Claims 1 through 13,

wherein the coated and not yet embossed electrode is calendered at a high temperature.
18. The method according to Claim 17,

wherein the calendering of the electrode is integrated into the winding process for manufacturing an electrode roll.
19. A method for manufacturing an electrode according to one of Claims 1 through 13,

wherein an already embossed metal film is coated with activated carbon.
20. A method for manufacturing an electrode according to one of Claims 1 through 13,

wherein an electrode is provided by uniformly coating an unembossed metal film with an activated carbon, and

channels (2) are scratched into the activated carbon layer of the electrode while simultaneously suctioning off the scratched-off coating.

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21. The method according to Claim 20,

wherein the channels (2) are scratched with the aid of
a swinging tip.
22. A method for manufacturing an electrode according to
one of Claims 1 through 13,

wherein regions of an unembossed metal film intended
for producing channels (2) are covered cyclically
during the coating of the metal film with activated
carbon, through which uncoated regions of the
electrode arise and thus form the channels (2).